Patent Claims

1. A method of transmitting user data over a synchronous digital communication network (SDH) wherein the user data are packed in multiplex units, wherein a plurality of multiplex units are contiguously concatenated (VC-4-4c), wherein the contiguously concatenated multiplex units are transmitted in a common transport module (STM-4), and wherein the contiguous concatenation of the multiplex units (VC-4-4c) is converted to a virtual concatenation of multiplex units (VC-4-Nv),

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that only part of the multiplex units are filled with user data, and that in the conversion, those multiplex units which are not filled with user data are omitted.

2. A method as claimed in claim 1 wherein the user data are data packets structured according to the Internet Protocol, wherein the packing of the data packets in multiplex units is performed in an IP router (10; 40), wherein the conversion of the contiguous concatenation

(VC-4-4c) to the virtual concatenation (VC-4-Nv) is performed in a multiplexer (12; 50) of the synchronous digital communication network (SDH), and wherein the IP router (10; 40) informs the multiplexer (12; 50) which of the concatenated multiplex units are filled with data packets.

3. A method as claimed in claim 1 wherein the user data are data packets structured according to the protocol for the asynchronous transfer mode, wherein the packing of the data packets in the multiplex units is performed in an ATM switch, wherein the conversion of the contiguous concatenation to the virtual concatenation is performed in a multiplexer (12; 50) of the synchronous digital communication network (SDH), and wherein the ATM switch informs the multiplexer (12; 50) which of the concatenated multiplex units are filled with data packets.

4. A method as claimed in claim 1 wherein the virtual concatenation is subsequently converted back to a contiguous concatenation, adding empty multiplex units corresponding to the previously omitted multiplex units.

5. A multiplexer (12; 50) for a synchronous digital communication network (SDH), comprising:
- a first interface (51) for receiving a first message signal which is organized into transport modules and contains a plurality of contiguously concatenated multiplex units carrying user data to be transmitted;
- a conversion facility (53, 54, 55, 56) for converting the contiguous concatenation to a virtual concatenation of the multiplex units; and

- at least a second interface (58) for sending at least a second message signal which is organized into transport modules and contains the virtually concatenated multiplex units,

characterized in

that if only part of the contiguously concatenated multiplex units are filled with the user data, the conversion facility (53, 54, 55, 56), when converting the contiguous concatenation to the virtual concatenation, omits those multiplex units which are not filled with user data.

6. A peripheral device (10, 40) for transmitting user data over a synchronous digital communication network, the peripheral device (10; 40) comprising a signal-generating unit (43) for generating a message signal which is organized into transport modules and contains a plurality of contiguously concatenated multiplex units carrying user data to be transmitted, and a multiplexing facility (42, 46) for packing the user data in the multiplex units, characterized in that the multiplexing facility (42, 46) fills only part of the multiplex units with user data.